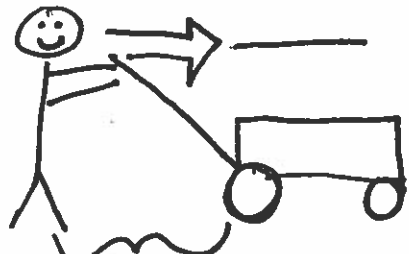
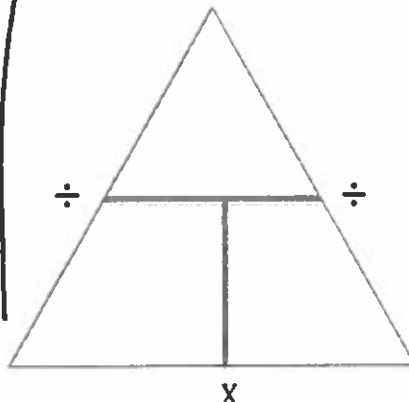
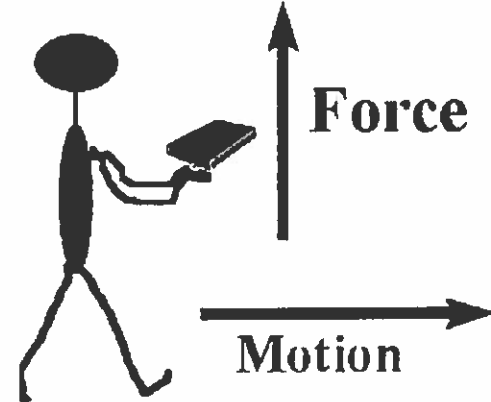
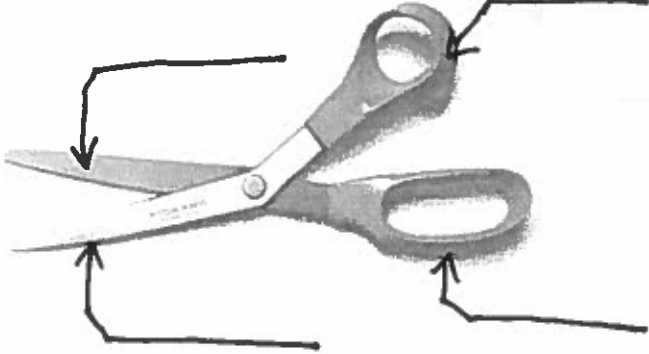


Name: \_\_\_\_\_

Chapter 4 Section 1  
Work & Machines

Vocab/Definitions	Examples/Pictures
<ul style="list-style-type: none"><li>❖ Work:</li><li>❖</li><li>❖ Work is measured in _____</li><li>❖ <math>1J = 1</math> _____</li></ul>	
<ul style="list-style-type: none"><li>❖ Work Equation:</li><li>❖ Work _____ to Motion</li></ul>	<p><i>Work Example</i></p> 
<ul style="list-style-type: none"><li>❖ What direction would you push to do the maximum amount of work?</li><li>❖ When force and motion are _____ work is equal to force x distance.</li></ul>	
<ul style="list-style-type: none"><li>❖ Force _____ to Motion</li><li>❖ When a force is _____ to motion, the work from that force is _____.</li><li>❖ Work in other directions is _____ than the force times the distance.<ul style="list-style-type: none"><li>❖ This means that when you are pushing at an angle the work done is _____ than if you were pushing in the same direction.</li></ul></li></ul>	<p>Is work being done here? Why/why not?</p>

Chapter 4 Section 1  
Work & Machines

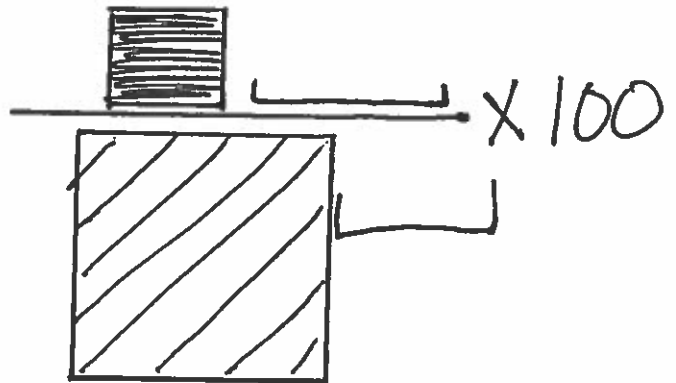
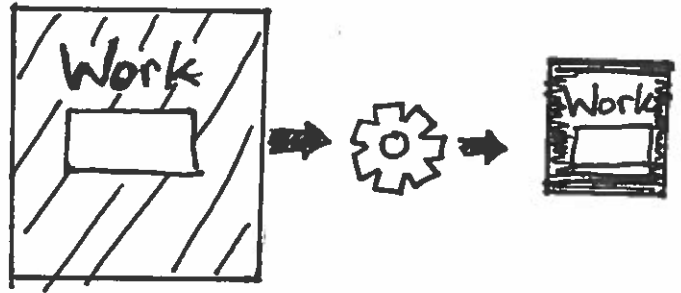
Vocab/Definitions	Examples/Pictures
❖ When is work done?	<p>Examples:</p> <ul style="list-style-type: none"> <li>▪</li> <li>▪</li> <li>▪</li> </ul>
❖ A machine is:	<p>Non-examples:</p> <ul style="list-style-type: none"> <li>▪</li> <li>▪</li> <li>▪</li> </ul>
❖ What would you use to help you lift/push a grand piano up into a moving truck?	<p>In the space below, draw a picture &amp; label an example of each simple machine:</p>
❖ Simple Machine:	<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>①</p> </div> <div style="text-align: center;"> <p>②</p> </div> <div style="text-align: center;"> <p>③</p> </div> </div>
❖ What are the six types of simple machines? 1. 2. 3. 4. 5. 6.	<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>④</p> </div> <div style="text-align: center;"> <p>⑤</p> </div> <div style="text-align: center;"> <p>⑥</p> </div> </div>
❖ Compound Machine:	<p>Label the two different types of simple machines that make up a pair of scissors:</p> 

Chapter 4 Section 1  
Work & Machines

Vocab/Definitions

- ❖ Machines help us do work by doing 2 things:
  - 
  -
  
- ❖ No machine can \_\_\_\_\_ both force and speed at the same time.
  
- ❖ You always put \_\_\_\_\_ work into a machine than you get \_\_\_\_\_ of a machine.
  
- ❖ To measure this difference in work we use \_\_\_\_\_.
  
- ❖ Efficiency:
  
- ❖ Efficiency Equation:
  
  
- ❖ So why are machines useful?
  - 
  - 
  -

Examples/Pictures



Chapter 4 Section 1  
Work & Machines

Vocab/Definitions	Examples/Pictures
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Why are machines useful?

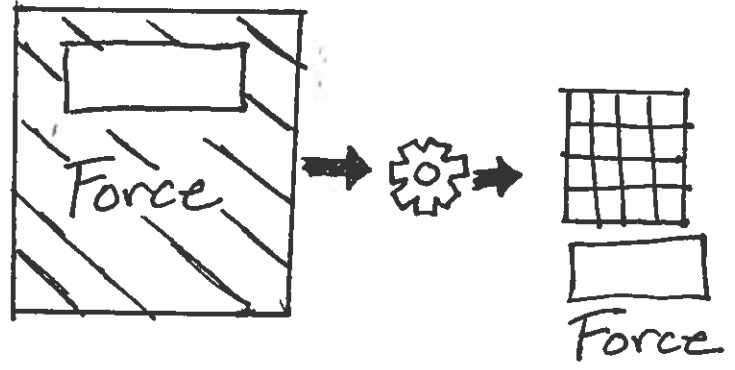
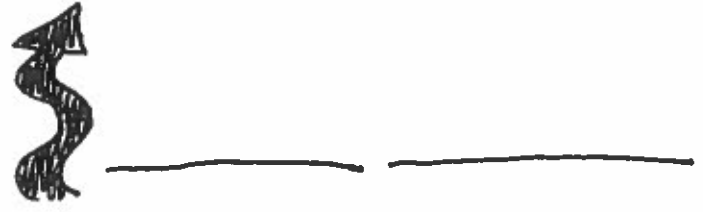
1. \_\_\_\_\_ Speed  
❖

2. Change \_\_\_\_\_ of Force  
❖

3. Increase \_\_\_\_\_  
❖

❖ Mechanical Advantage:

❖ Mechanical Advantage Equation:



MA Example:

★ There are \_\_\_\_\_ units for mechanical advantage.